

**To:** Card, Joan[Card.Joan@epa.gov]  
**Cc:** Ostrander, David[Ostrander.David@epa.gov]; McGrath, Shaun[McGrath.Shaun@epa.gov]; Faulk, Libby[Faulk.Libby@epa.gov]  
**From:** Myers, Craig  
**Sent:** Sun 8/9/2015 6:59:15 PM  
**Subject:** Re: Runoff data for USGS streamgage 09358550 Cement Creek at Silverton, CO

Joan, et al:

Made minor tweaks as below. I'd also add something at the end as to how long it typically takes USGS to produce final data. I don't want to get hammered for new estimates in a week if it takes them months to do it. Approved as commented.

Craig Myers

Federal On-Scene Coordinator

Incident Commander, Gold King Mine Blowout Incident

The USGS operates a streamgage near the mouth of Cement Creek in Silverton, Colorado which recorded a relatively flashy runoff event on August 5, 2015

([http://waterdata.usgs.gov/co/nwis/uv/?site\\_no=09358550&PARAMeter\\_cd=00065,00060](http://waterdata.usgs.gov/co/nwis/uv/?site_no=09358550&PARAMeter_cd=00065,00060)).

The streamgage provides provisional stream stage and discharge values in 15-minute increments. Increased flows were evidenced at the gage at about about 12:30 PM and ended about 7:15 PM. The total volume of runoff for the event above base flow was calculated by 1) subtracting an assumed base flow of 27 cubic feet per second from each 15-minute discharge value, 2) using the resulting discharge values to compute the total volume of runoff for each 15-minute period (initially in cubic feet and then gallons), and 3) summing the volume of runoff for each 15-minute period. This resulted in a calculated runoff volume above base flow for the event of 3,043,067 gallons which is rounded to an estimate of 3 million gallons. The data are considered provisional because the stage and discharge records have not yet gone through a formal review. However, one of our technicians visited the gage on July 31 and August 8, 2015 and we are confident the streamgage is providing good provisional data for August 5.

Sent from my iPad

On Aug 9, 2015, at 12:37 PM, Card, Joan <[Card.Joan@epa.gov](mailto:Card.Joan@epa.gov)> wrote:

Embargoed—Do Not Release

David, Craig: See information below from USGS. Please review and make a decision about revising the spill volume. Please let this group know when you have made that revision. After that, we will implement a communications strategy with the goal of getting it out as soon as possible today. Thanks. Joan

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**Joan Card** | Senior Policy Advisor

Office of the Regional Administrator

USEPA Region 8 (CO, MT, ND, SD, UT, WY)

1595 Wynkoop Street | Denver, CO 80202

(303) 312-6468

**From:** Ethridge, Max [<mailto:methridge@usgs.gov>]

**Sent:** Sunday, August 09, 2015 12:09 PM

**To:** Card, Joan

**Cc:** Kimbrough, Robert; Lori Caramanian; Robert Horton; Timothy Raines; Suzanne Paschke; Mark Sogge

**Subject:** Re: Runoff data for USGS streamgage 09358550 Cement Creek at Silverton, CO

Joan,

Yes, you can quote/attribute this estimate to USGS.

Max

On Sun, Aug 9, 2015 at 8:48 AM, Card, Joan <[Card.Joan@epa.gov](mailto:Card.Joan@epa.gov)> wrote:

Bob, and others, thank you very much. Our plan will be to review this information at EPA and then, likely fairly early today, announce a revised estimate based on your statement below.

Can we quote/attribute to USGS from the statement below?

Joan Card  
Senior Policy Advisor  
Office of the Regional Administrator  
EPA, Region 8 (CO, MT, ND, SD, UT, WY)  
1595 Wynkoop  
Denver, CO 80202

(303) 312-6468

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**From:** Kimbrough, Robert <[rakimbrow@usgs.gov](mailto:rakimbrow@usgs.gov)>  
**Sent:** Sunday, August 9, 2015 8:56 AM  
**To:** Card, Joan  
**Cc:** Max Ethridge; Lori Caramanian; Robert Horton; Timothy Raines; Suzanne Paschke; Robert Kimbrough  
**Subject:** Runoff data for USGS streamgage 09358550 Cement Creek at Silverton, CO

Joan,

Max Ethridge asked me to provide you with the following information.

The USGS operates a streamgage near the mouth of Cement Creek in Silverton, Colorado which recorded a relatively flashy runoff event on August 5, 2015 ([http://waterdata.usgs.gov/co/nwis/uv/?site\\_no=09358550&PARAMeter\\_cd=00065,00060](http://waterdata.usgs.gov/co/nwis/uv/?site_no=09358550&PARAMeter_cd=00065,00060)).

The streamgage provides provisional stream stage and discharge values in 15-minute increments. The event started about 12:30 PM and ended about 7:15 PM. The total volume of runoff for the event above

base flow was calculated by 1) subtracting an assumed base flow of 27 cubic feet per second from each 15-minute discharge value, 2) using the resulting discharge values to compute the total volume of runoff for each 15-minute period (initially in cubic feet and then gallons), and 3) summing the volume of runoff for each 15-minute period. This resulted in a calculated runoff volume above base flow for the event of 3,043,067 gallons which is rounded to an estimate of 3 million gallons. The data are considered provisional because the stage and discharge records have not yet gone through a formal review. However, one of our technicians visited the gage on July 31 and August 8, 2015 and we are confident the streamgage is providing good provisional data for August 5.

Please let me know if I can be of further assistance.

Bob

**Robert Kimbrough | U.S. Geological Survey**

Associate Director for Hydrologic Data | Colorado Water Science Center  
office: 303.236.6902 | cell: 720.428.9576 | email: [rakimbrow@usgs.gov](mailto:rakimbrow@usgs.gov)

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Max M Ethridge, PhD

US Geological Survey

Regional Director, Southwest Region

P.O. Box 25046 MS 911

Denver, CO 80225-0046

303-236-5548 office

573-999-0198 cell

email: [methridge@usgs.gov](mailto:methridge@usgs.gov)